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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re the Application of:	Group Art Unit: 1631
Wonderling, Ramani S. Boroughs, Karen L.	Examiner: Martinell, James
Patent No.: 6,818,444 B2	REQUEST FOR CERTIFICATE OF CORRECTION FOR USPTO MISTAKES
Issued: November 16, 2004	
Serial No.: 09/917,265	
Filed: July 27, 2001	
Atty. File No.: IM-5	
For: "CANINE AND FELINE PROTEINS, NUCLEIC ACID MOLECULES AND USES THEREOF"	

CERTIFICATE OF MAILING

I HEREBY CERTIFY THAT THIS CORRESPONDENCE IS BEING DEPOSITED WITH THE U.S. POSTAL SERVICE AS FIRST CLASS MAIL, ADDRESSED TO COMMISSIONER FOR PATENTS, ATTN: CERTIFICATE OF CORRECTION BRANCH COMMISSIONER FOR PATENTS, P.O. BOX 1450, ALEXANDRIA, VA 22313-1450, THIS 19 DAY OF FEBRUARY 2008.

HESKA CORPORATION

By: Susan Gordon
Susan Gordon

Commissioner for Patents
ATTN: Certificate of Correction Branch
P.O. Box 1450
Alexandria, Virginia 22313-1450

Certificate
FEB 27 2008
of Correction

Dear Sir:

This is a request for a Certificate of Correction under 37 C.F.R. 1.322(a). Attached is Form PTO-1050. The errors in the claims appear to be typographic or scanning errors made by the USPTO. The corrections requested are supported by claim amendments submitted in the Amendment and Response After Final, filed November 25, 2003; and acknowledged and accepted by the Examiner in the Notice of Allowance, dated December 29, 2003 (see copies of documents attached). The errors to be corrected are as follows:

Column 191, line 43, please replace "47 contiguous nucleoitedes identical in sequence to at least" with --47 contiguous nucleotides identical in sequence to at least--.

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Column 191, line 44, please replace "47 cotiguous nucleotides of a nucleic acid sequence slelcted" with --47 contiguous nucleotides of a nucleic acid sequence selected--.

Column 191, line 49, please replace "acid sequence selected form the group consisting of SEQ ID" with --acid sequence selected from the group consisting of SEQ ID--.

Column 192, line 40, please replace "A nucleic acid molecule of claim 1, wherein said" with --The nucleic acid molecule of claim 1, wherein said--.

Respectfully submitted,

Dated: February 15, 2008

By: _____

Richard J. Stern, Ph.D.
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(Also Form PTO-1050)

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : **6,818,444 B2**

DATED : **November 16, 2004**

INVENTOR(S) : **Ramani S. Wonderling and Karen L. Boroughs**

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 191, line 43, please replace "47 contiguous nucleoitedes identical in sequence to at least" with --47 contiguous nucleotides identical in sequence to at least--.

Column 191, line 44, please replace "47 cotiguous nucleotides of a nucleic acid sequence slelcted" with --47 contiguous nucleotides of a nucleic acid sequence selected--.

Column 191, line 49, please replace "acid sequence selected form the group consisting of SEQ ID" with --acid sequence selected from the group consisting of SEQ ID--.

Column 192, line 40, please replace "A nucleic acid molecule of claim 1, wherein said" with --The nucleic acid molecule of claim 1, wherein said--.

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Legal Department
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In Re the Application of:

Wonderling, Ramani S.
Boroughs, Karen L.

Serial No.: 09/917,265

Filed: July 27, 2001

Atty. File No.: IM-5

For: "CANINE AND FELINE PROTEINS, NUCLEIC ACID MOLECULES AND USES THEREOF"

Group Art Unit: 1631

Examiner: Martinell, James

AMENDMENT AND RESPONSE AFTER FINAL

CERTIFICATE OF FACSIMILE TRANSMISSION

I HEREBY CERTIFY THAT THIS CORRESPONDENCE IS BEING FACSIMILE TRANSMITTED TO EXAMINER JAMES MARTINELL, PhD, AT FAX NO. 703-872-9306, ADDRESSED TO MAIL STOP AF, COMMISSIONER FOR PATENTS, P.O. BOX 1450, ALEXANDRIA, VA 22313-1450, THIS 25TH DAY OF NOVEMBER 2003.

HESKA CORPORATION

By: Susan A. Gordon

Susan A. Gordon

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Dear Sir:

This Amendment and Response is being filed in response to the Final Office Action mailed from the U.S. Patent and Trademark Office on August 26, 2003 and the telephone interview held with Examiner Martinell on November 4, 2003. Prior to the Examiner's review of the claims of the above-referenced application, please enter the following amendments.

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Amendments to the Claims

1-21 (Canceled)

Please cancel Claims 24-27, and 37-40. The Claims should now read as follows:

22. (Previously presented) An isolated nucleic acid molecule selected from the group consisting of:

(a) an isolated nucleic acid molecule comprising:

(i) a nucleic acid sequence encoding a canine p40 subunit protein;

(ii) a nucleic acid linker of $(XXX)_n$ wherein n=0 to 60; and

(iii) a nucleic acid sequence encoding a canine p35 subunit protein; and

(b) an isolated nucleic acid molecule comprising a nucleic acid sequence fully complementary to the nucleic acid molecule set forth in (a).

23. (Previously presented) The isolated nucleic acid molecule of Claim 22, wherein the p40 encoding nucleic acid sequence comprises at least 47 contiguous nucleotides identical in sequence to at least 47 contiguous nucleotides of a nucleic acid sequence selected from the group consisting of SEQ ID NO:52 and SEQ ID NO:58, and wherein the p35 encoding nucleic acid sequence comprises at least 47 contiguous nucleotides identical in sequence to at least 47 contiguous nucleotides of a nucleic acid sequence selected from the group consisting of SEQ ID NO:46 and SEQ ID NO:49.

24-27. (Canceled)

28. (Previously presented) The nucleic acid molecule of Claim 22, wherein said nucleic acid linker lies 3' of the p35 subunit encoding nucleic acid sequence and 5' of the p40 subunit encoding nucleic acid sequence.

29. (Currently amended) The nucleic acid molecule of Claim ~~29~~ 28 wherein said nucleic acid linker comprises SEQ ID NO:83.

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30. (Previously presented) The nucleic acid molecule of Claim 22, wherein said nucleic acid molecule comprises a nucleic acid sequence that encodes a canine IL-12 single chain protein.

31. (Currently amended) The nucleic acid molecule of Claim ~~31~~ 30, wherein said single chain protein is selected from the group consisting of:

(a) single chain protein comprising a p40 subunit at the N-terminus and a p35 subunit at the C-terminus; and

(b) single chain protein comprising a 35 subunit at the N-terminus and a 40 subunit at the C-terminus

32. (Previously presented) The nucleic acid molecule of Claim 22, wherein said nucleic acid molecule comprises a nucleic acid molecule selected from the group consisting of nCaIL-12_{1599} and nCaIL-12_{1533}.

33. (Previously presented) A recombinant molecule comprising a nucleic acid molecule as set forth in Claim 22.

34. (Previously presented) A recombinant virus comprising a nucleic acid molecule as set forth in Claim 22.

35. (Previously presented) A recombinant cell comprising a nucleic acid molecule as set forth in Claim 22.

36. (Previously presented) A composition comprising an excipient and an isolated nucleic acid molecule of Claim 22.

37-40. (Canceled)

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REMARKS

Interview Summary

The meaning of the term "selective binding' was discussed as was the effect of assay conditions on binding assays. Alternative wording for this term was discussed. The ability of one skilled in the art to screen large numbers of proteins was discussed as it related to undue experimentation. The specific assays were not discussed. No agreement was reached with respect to the Claims.

Amendments

Due to the prior omission of a Claim 24, Applicants have renumbered Claims 25 - 41 in accordance with the Examiners actions noted in the final Office Action. For clarity, the following chart relates the prior Claim numbering to the new Claim numbering:

Prior Claim Number	Renumbered as Claim	Prior Claim Number	Renumbered as Claim
22	22	33	32
23	23	34	33
25	24	35	34
26	25	36	35
27	26	37	36
28	27	38	37
29	28	39	38
30	29	40	39
31	30	41	40
32	31		

As a result of the alteration in the Claim numbers, Claims 29 and 31 have been amended to correctly indicate the Claims from which they depend. Applicants submit no substantive amendments have been made to these Claims.

Applicants note items 5 & 6 on page 1 of the Final Office Action indicate that Claim 37 has been allowed. However, the Examiner has rejected this Claim for lack of enablement on page 3 of the same Office Action. Therefore, Applicants are assuming Claim 37 stands rejected.

Rejected Claims 24-27 and 37-40 have been canceled.

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CONCLUSION

Applicants have canceled all rejected Claims and request issuance of allowed Claims 22, 23 and 28-36. The Examiner is invited to contact the undersigned should any issues remain.

Respectfully submitted,

Dated: November 25, 2003

By: _____

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Heska Corporation
1613 Prospect Parkway
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Date: November 25, 2003

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Name: Examiner James Martinell, Ph.D., Group Art Unit 1631

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Telephone Number: 703-308-0296

Pages: 6 (including this cover page)

Subject: Attorney File No. IM-5

U.S. Patent Application Serial No. 09/917,265

From: Richard L. Stern, Ph.D. (970-493-7272, F-14174)

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Subject: Attorney File No. IM-5

U.S. Patent Application Serial No. 09/917,265

From: Richard J. Stern, Ph.D. (970-493-7272 - Ext 4174)

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Telephone Number: 703-308-0296

Pages: 6 (including this cover page)

Subject: Attorney File No. IM-5
U.S. Patent Application Serial No. 09/917,265

From: Richard J. Stern, Ph.D. (970-493-7272 - Ext 4174)

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PAGE 1/6 * RCVD AT 11/25/2003 11:52:12 AM [Eastern Standard Time] * SVR:USPTO-EFXRF-1/1 * DNIS:8729306 * CSID:970 491 9976 * DURATION (mm-ss):01-34

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EXAMINER
MARTINELL, JAMES

ART UNIT	PAPER NUMBER
1631	

DATE MAILED: 12/29/2003

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/917,265	07/27/2001	Ramani S. Wonderling	IM-5	7797

TITLE OF INVENTION: CANINE AND FELINE PROTEINS, NUCLEIC ACID MOLECULES AND USES THEREOF

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	$1330	$300	$1630	03/29/2004

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE REFLECTS A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE APPLIED IN THIS APPLICATION. THE PTOL-85B (OR AN EQUIVALENT) MUST BE RETURNED WITHIN THIS PERIOD EVEN IF NO FEE IS DUE OR THE APPLICATION WILL BE REGARDED AS ABANDONED.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status is changed, pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above and notify the United States Patent and Trademark Office of the change in status, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check the box below and enclose the PUBLICATION FEE and 1/2 the ISSUE FEE shown above.

☐ Applicant claims SMALL ENTITY status. See 37 CFR 1.27.

II. PART B - FEE(S) TRANSMITTAL should be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). Even if the fee(s) have already been paid, Part B - Fee(s) Transmittal should be completed and returned. If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PTOL-85 (Rev. 11/03) Approved for use through 04/30/2004.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/917,265	07/27/2001	Ramani S. Wonderling	IM-5	7797

26949 7590 12/29/2003

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FORT COLLINS, CO 80525

EXAMINER	
MARTINELL, JAMES	
ART UNIT	**PAPER NUMBER**
1631	

DATE MAILED: 12/29/2003

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 58 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 58 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) system (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (703) 305-1383. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at (703) 305-8283.

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Notice of Allowability	Application No.	Applicant(s)	
	09/917,265	WONDERLING ET AL.	
	Examiner	Art Unit	
	James Martinell	1631	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *the response filed 11/25/03*.
2. ☒ The allowed claim(s) is/are *22,23 and 28-36*.
3. ☐ The drawings filed on _____ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

 * Certified copies not received: _____.
5. ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
 (a) ☐ The translation of the foreign language provisional application has been received.
6. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE**

7. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
8. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 1) ☐ hereto or 2) ☐ to Paper No. ____.
 (b) ☐ including changes required by the proposed drawing correction filed _____, which has been approved by the Examiner.
 (c) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the margin according to 37 CFR 1.121(d).

9. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1☐ Notice of References Cited (PTO-892)
2☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No. _____
4☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5☐ Notice of Informal Patent Application (PTO-152)
6☐ Interview Summary (PTO-413), Paper No._____ .
7☐ Examiner's Amendment/Comment
8☐ Examiner's Statement of Reasons for Allowance
9☐ Other

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James Martinell
Primary Examiner
Art Unit: 1631

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US006818444B2

(12) **United States Patent**
Wonderling et al.

(10) **Patent No.: US 6,818,444 B2**
(45) **Date of Patent: Nov. 16, 2004**

COPY

(54) **CANINE AND FELINE PROTEINS, NUCLEIC ACID MOLECULES AND USES THEREOF**

(75) Inventors: **Ramani S. Wonderling**, Waukegan, IL (US); **Karen L. Boroughs**, Fort Collins, CO (US)

(73) Assignee: **Heska Corporation**, Fort Collins, CO (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 58 days.

(21) Appl. No.: **09/917,265**

(22) Filed: **Jul. 27, 2001**

(65) **Prior Publication Data**

US 2002/0052030 A1 May 2, 2002

Related U.S. Application Data

(60) Provisional application No. 60/223,016, filed on Aug. 4, 2000.

(51) **Int. Cl.**[7] **C12N 15/00**

(52) **U.S. Cl.** **435/320.1**; 435/235.1; 435/320.1; 435/325; 536/23.1; 514/44

(58) **Field of Search** 435/320.1, 69.52, 435/325, 252.3; 530/23.1, 23.5

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(57) **ABSTRACT**

The present invention relates to canine and feline proteins. In particular, the present invention discloses feline interleukin-18, feline caspase-1, feline interleukin-12 single chain and canine interleukin-12 single chain proteins. The present invention also includes feline interleukin-18, feline caspase-1, feline interleukin-12 single chain and canine interleukin-12 single chain nucleic acid molecules encoding such proteins, antibodies raised against such proteins and/or inhibitors of such proteins or nucleic acid molecules. The present invention also includes therapeutic compositions comprising such nucleic acid molecules, proteins, antibodies and/or inhibitors, as well as their use to evaluate and regulate an immune response in an animal.

11 Claims, No Drawings

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ctcctgctgc tgctgctact gctactggag cttatatacc ctactcctac cgagcttttg 2220

gatggaaact taaactagaa actgacttgt ccaagttgcc tcgtgcc 2267

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<213> ORGANISM: Artificial
<220> FEATURE:
<223> OTHER INFORMATION: Synthetic Linker

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1 5

<210> SEQ ID NO 111
<211> LENGTH: 10
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1 5 10

What is claimed is:

1. An isolated nucleic acid molecule selected from the group consisting of:

(a) an isolated nucleic acid molecule comprising:

(i) a nucleic acid sequence encoding a canine p40 subunit protein;

(ii) a nucleic acid linker of $(XXX)_n$ wherein n=0 to 60; and

(iii) a nucleic acid sequence encoding a canine p35 subunit protein; and

(b) an isolated nucleic acid molecule comprising a nucleic acid sequence fully complementary to the nucleic acid molecule set forth in (a).

2. The isolated nucleic acid molecule of claim 1, wherein the p40 encoding nucleic acid sequence comprises at least 47 contiguous nucleoitedes identical in sequence to at least 47 cotiguous nucleotides of a nucleic acid sequence selcted from the group consisting of SEQ ID NO:52 and SEQ ID NO:58, and wherein the p35 encoding nucleic acid sequence comprises at least 47 contiguous nucleotides identical in sequence to at least 47 contiguous nucleotides of a nucleic acid sequence selected form the group consisting of SEQ ID NO:46 and SEQ ID NO:49.

3. The nucleic acid molecule of claim 1, wherein said nucleic acid linker lies 3' of the p35 subunit encoding nucleic acid sequence and 5' of the p40 subunit encoding nucleic sequence.

4. The nucleic acid molecule of claim 3 wherein said nucleic acid linker comprises SEQ ID NO:83.

5. The nucleic acid molecule of claim 1, wherein said nucleic acid molecule comprises a nucleic acid sequence that encodes a canine IL-12 single chain protein.

6. The nucleic acid molecule of claim 5, wherein said single chain protein is selected from the group consisting of:

(a) single chain protein comprising a p40 subunit at the N-terminus and a p35 subunit at the C-terminus; and

(b) single chain protein comprising a 35 subunit at the N-terminus and a 40 subunit at the C-terminus.

7. A nucleic acid molecule of claim 1, wherein said nucleic acid molecule comprises a nucleic acid molecule selected from the group consisting of nCaIL-12_{1599} and nCaIL-12_{1533}.

8. A recombinant molecule comprising a nucleic acid molecule as set forth in claim 1.

9. A recombinant virus comprising a nucleic acid molecule as set forth in claim 1.

10. A recombinant cell comprising a nucleic acid molecule as set forth in claim 1.

11. A composition comprising an excipient and an isolated nucleic acid molecule of claim 1.

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